

## **AMENDMENTS TO THE CLAIMS**

### **Amendments to the Claims:**

Please cancel claims 1-12 presented in the underlying International Application No. PCT/EP2004/008742 without prejudice, and add new claims 13-26 as shown in the listing of claims.

This listing will replace all prior versions, and listings, of claims in the application:

### **Listing of Claims:**

Claims 1-12 (canceled)

Claim 13 (new): A method for non-instrument-dependent determination of coordinates of a point imaged using a microscope, the method comprising:

determining, at object-related reference coordinates of at least one imaged reference point in a DICOM coordinate system, corresponding first instrument coordinates of the at least one imaged reference point in an instrument-dependent coordinate system;

determining, using the object-related reference coordinates and the corresponding first instrument coordinates, a transformation rule for converting instrument-dependent coordinates into corresponding coordinates of the DICOM coordinate system; and then

converting, using the transformation rule, second instrument coordinates of an imaged point into non-instrument-dependent coordinates of the DICOM coordinate system.

Claim 14 (new): The method as recited in claim 13 further comprising presetting the reference coordinates using a calibration slide.

Claim 15 (new): The method as recited in claim 14 wherein the calibration slide corresponds to a first type of microscope slide.

Claim 16 (new): The method as recited in claim 14 further comprising providing the calibration slide based on a first type of microscope slide.

Claim 17 (new): The method as recited in claim 13 wherein the determining the transformation rule is performed using an overdetermined affine transformation.

Claim 18 (new): The method as recited in claim 13 wherein the determining the transformation rule is performed using an overdetermined affine transformation for x, y coordinates of the instrument-dependent coordinates.

Claim 19 (new): The method as recited in claim 13 wherein the determining the transformation rule is performed using at least one of an averaging and an inclined plane approach.

Claim 20 (new): The method as recited in claim 13 wherein the determining the transformation rule is performed using at least one of an averaging and an inclined plane approach for a z coordinate of the instrument-dependent coordinates.

Claim 21 (new): A calibration slide comprising at least one reference point with preset reference coordinates in a DICOM coordinate system, the preset reference coordinates being usable to determine corresponding first instrument coordinates of the at least one reference point when the at least one reference point is imaged by a microscope so as to enable the determining of a transformation rule for converting instrument-dependent coordinates into corresponding coordinates of the DICOM coordinate system.

Claim 22 (new): The calibration slide as recited in claim 21 wherein the slide has a shape and a size corresponding to a type of microscope slide.

Claim 23 (new): A system for non-instrument-dependent determination of coordinates of a point to be imaged using a microscope, the system comprising:

a coordinate-determination unit configured to determine instrument coordinates of an imaged point; and

a computer unit configured to calculate, from first instrument coordinates of at least one imaged reference point and associated predetermined object-related reference coordinates in a DICOM coordinate system, a transformation rule for converting instrument-dependent coordinates into coordinates of the DICOM coordinate system.

Claim 24 (new): The system as recited in claim 23 wherein the computer unit is configured to calculate, from the instrument coordinates of the imaged point using the calculated transformation rule, corresponding non-instrument-dependent coordinates in the DICOM coordinate system.

Claim 25 (new): A computer readable medium having stored thereon computer executable process steps operative to perform a method for non-instrument-dependent determination of coordinates of a point imaged using a microscope, the method comprising:

determining, at object-related reference coordinates of at least one imaged reference point in a DICOM coordinate system, corresponding first instrument coordinates of the at least one imaged reference point in an instrument-dependent coordinate system;

determining, using the object-related reference coordinates and the corresponding first instrument coordinates, a transformation rule for converting instrument-dependent coordinates into corresponding coordinates of the DICOM coordinate system; and then

converting, using the transformation rule, second instrument coordinates of an imaged point into non-instrument-dependent coordinates of the DICOM coordinate system.

Claim 26 (new): The computer readable medium as recited in claim 25 wherein the computer executable process steps are executable by a computer unit of a system for non-instrument-dependent determination of coordinates of a point to be imaged using a microscope, the system comprising the computer unit and a coordinate-determination unit configured to determine instrument coordinates of an imaged point, the computer unit being configured to calculate, from first instrument coordinates of at least one imaged reference point and associated predetermined object-related reference coordinates in a DICOM coordinate system, a transformation rule for converting instrument-dependent coordinates into coordinates of the DICOM coordinate system.